WE CLAIM

1. (Original) An apparatus comprising:

a transmitter for transmitting information towards at least a first network unit and a second network unit;

a receiver for receiving information transmitted from at least one network unit; and

a media access controller for issuing data grants; wherein at least one data grant authorizes a first network unit to transmit data at a first bit-rate during at least one time-slot and at least one other data grant authorizes a second network unit to transmit data at a second bit-rate during at least one other time-slot, whereas the second bit-rate differs from the first bit-rate.

2. (Original) The apparatus according to claim 1 wherein a data grant authorizes a network unit to transmit at least one cell during at least one time-slot.

3. (Original) The apparatus of claim 2 wherein the cells are Asynchronous Transfer Mode cells.

4. (Original) The apparatus according to claim 1 wherein the first bit-rate is much slower than the second bit-rate.

5. (Original) The apparatus of claim 1 wherein the ratio between the second bit-rate and the first bit-rate ranges between two and six.

6. (Original) The apparatus of claim 1 wherein the receiver has at least one reception path adapted to receive information bursts of at least one bit-rate.

7. (Original) The apparatus of claim 1 further adapted to receive information reflecting at least one bit-rate out of the first bit-rate and the second bit-rate.

8. (Original) The apparatus according to claim 1 further adapted to request a network unit capable of transmitting at multiple bit-rates to transmit at certain bit-rate out of said multiple bit-rates.

9. (Original) The apparatus according to claim 8 wherein the apparatus selects said certain bit-rate in response to network unit related information previously transmitted from the network unit.

10. (Original) The apparatus according to claim 8 wherein the apparatus selects said certain bit-rate in response to bit-rates of other network units that are coupled to the apparatus.

11. (Original) The apparatus according to claim 8 wherein the apparatus selects said certain bit-rate in response to bandwidth requirements.

12. (Original) The apparatus of claim 1 wherein the receiver comprises a first path adapted to receive transmissions of a first bit-rate and further comprises a second path adapted to receive transmissions of a second bit-rate.

13. (Original) A method for allocating upstream bandwidth of a shared upstream channel of an optical network, the optical network interconnecting an apparatus with at least a first network unit and a second network unit, the method comprising the stages of:

receiving requests for transmitting information towards the apparatus entity; and

issuing data grants in response to the requests; wherein at least one data grant authorizes a first network unit to transmit data at a first bit-rate during at least one time-slot and at least one other data grant authorizes a second network unit to transmit data at a second bit-rate during at least one other time-slot, whereas the second bit-rate differs from the first bit-rate.

14. (Original) The method according to claim 13 wherein a data grant authorizes a network unit to transmit at least one cell during at least one time-slot.

15. (Original) The method of claim 14 wherein the cells are Asynchronous Transfer Mode cells.

16. (Original) The method according to claim 13 wherein the first bit-rate is much slower than the second bit-rate.

17. (Original) The method according to claim 14 wherein the ratio between the second and first bit-rate ranges between two and six.

18. (Original) The method according to claim 13 further comprises a stage of receiving, at the apparatus, information from at least one network unit.

19. (Original) The method according to claim 18 further adapted to receive information reflecting at least one bit-rate out of the first bit-rate and the second bit-rate.

20. (Original) The method according to claim 13 further comprising a stage of requesting a network unit capable of transmitting at multiple bit-rates to transmit at certain bit-rate out of said multiple bit-rates.

21. (Original) The method according to claim 20 wherein the stage of requesting is preceded by a stage of selecting said certain bit-rate in response to network unit related information previously transmitted from the network unit.

22. (Original) The method according to claim 20 wherein the stage of requesting is preceded by a stage of selecting said certain bit-rate in response to bit-rates of other network units that are coupled to the apparatus.

23. (Original) The method according to claim 20 wherein the stage of requesting is preceded by a stage of selecting said certain bit-rate in response to the requests for transmitting information.

24. (Original) A computer readable medium having code embodied therein for causing an electronic device to perform the stages of:

receiving requests for transmitting information from a network unit, over an optical network, towards an apparatus; and

issuing data grants in response to at least the requests; wherein at least one data grant authorizes a first network unit to transmit data at a first bit-rate during at least one time-slot and at least one other data grant authorizes a second network unit to transmit data at a second bit-rate during at least one other time-slot, whereas the second bit-rate differs from the first bit-rate.